COMPLETE LISTING OF THE CLAIMS

The following lists all of the claims that are or were in the above-identified patent application. The status identifiers respectively provided in parentheses following the claim numbers indicate the current statuses of the claims. In particular, claims having the status of "currently amended" are being amended in this reply.

1. (Previously presented) An interferometer comprising:

a laser system that produces a heterodyne beam including a first frequency component having a first polarization and a second frequency component having a second polarization;

a coated polarizing beam splitter oriented so that the heterodyne beam has a non-zero incidence angle with the coated polarizing beam splitter, the coated polarizing beam splitter splitting the heterodyne beam into a first beam and a second beam respectively having the first and second frequencies; and

interferometer optics that generate measurement and reference beams from the first and second beams.

2. (Previously presented) The interferometer of claim 1, wherein the non-zero incidence angle is an angle corresponding to a peak in the extinction ratio of a reflected beam in the coated polarizing beam splitter.

3. (Original) The interferometer of claim 1, further comprising a beam combiner positioned to receive the first and second beams and provide a recombined heterodyne beam to the interferometer optics.

4. (Previously presented) The interferometer of claim 3, wherein the beam combiner comprises a second coated polarizing beam splitter and is oriented to receive the first and second beams at non-zero incidence angles.

THE PATENT LAW OFFICES
OF DAVID MILLERS
6560 ASHFIELD COURT
SAN JOSE, CA 95120
PH: (408) 927-6700
FX: (408) 927-6701

5. (Previously presented) The interferometer of claim 4, wherein the non-zero incidence angles correspond to a peak in the extinction ratio of a reflected beam in the second coated polarizing beam splitter.

Claims 6-15. (Canceled)

16. (Previously presented) The interferometer of claim 1, wherein the coated polarizing beam splitter comprises:

a first piece of glass;

a second piece of glass; and

a beam splitter coating between the first and second pieces of glass, wherein

the heterodyne beam is at the non-zero incident angle with a normal to a surface of the first piece of glass.

17. (Currently Amended) The interferometer of ~~claim 6~~ claim 16, wherein the non-zero incident angle corresponds to a peak extinction ratio for a beam reflected from the beam splitter coating.

18. (Currently Amended) The interferometer of ~~claim 6~~ claim 16, wherein the first and second pieces of glass are prisms with cross-sections that are triangles including a right angle and a 45° angle.

19. (Previously presented) The interferometer of claim 1, further comprising a mounting structure containing the coated polarizing beam splitter, wherein the mounting structure permits adjustment of an orientation of the coated polarizing beam splitter during an alignment process that sets the non-zero incidence angle.

20. (Previously presented) An interferometer comprising:

a laser system that produces a heterodyne beam including a first frequency component having a first polarization and a second frequency component having a second polarization;

a polarizing beam splitter containing a coating oriented so that the heterodyne beam has an incidence angle with the coating that differs from 45°, the coating splitting the heterodyne beam into a first beam and a second beam respectively having the first and second frequencies; and

interferometer optics that generate measurement and reference beams from the first and second beams.

THE PATENT LAW OFFICES
OF DAVID MILLERS
6560 ASHFIELD COURT
SAN JOSE, CA 95120
PH: (408) 927-6700
FX: (408) 927-6701

21. (Previously presented) The interferometer of claim 20, wherein a difference between the incidence angle and 45° is a non-zero angle that provides a peak in a ratio of a predominant polarization component of a reflected beam to an orthogonal polarization

component of the reflected beam.

22. (Previously presented) The interferometer of claim 21, further comprising a mounting structure containing the polarizing beam splitter, wherein the mounting structure permits adjustment of an orientation of the polarizing beam splitter during an alignment process that sets the non-zero angle.

THE PATENT LAW OFFICES
OF DAVID MILLERS
6560 ASHFIELD COURT
SAN JOSE, CA 95120
PH: (408) 927-6700
FX: (408) 927-6701